

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2019/0384381 A1 Stafford et al.

Dec. 19, 2019 (43) **Pub. Date:**

(54) SELECTIVE PERIPHERAL VISION FILTERING IN A FOVEATED RENDERING **SYSTEM**

(71) Applicant: Sony Interactive Entertainment Inc., Tokyo (JP)

(72) Inventors: Jeffrey Roger Stafford, Redwood City, CA (US); Andrew Young, San Mateo, CA (US)

(21) Appl. No.: 16/235,727

(22) Filed: Dec. 28, 2018

Related U.S. Application Data

(63) Continuation of application No. 15/087,629, filed on Mar. 31, 2016, now Pat. No. 10,169,846.

Publication Classification

(51) Int. Cl. G06F 3/01 (2006.01)G06F 1/16 (2006.01)G06F 3/03 (2006.01) G06T 17/20 (2006.01)(2006.01)G02B 27/01

(52) U.S. Cl.

CPC G06F 3/012 (2013.01); G06F 3/013 (2013.01); G06F 1/163 (2013.01); G06F 1/1694 (2013.01); G06F 3/011 (2013.01); G06F 3/0304 (2013.01); G02B 2027/0187 (2013.01); G02B 27/017 (2013.01); G02B 27/0179 (2013.01); G06T 2210/36 (2013.01); G02B 2027/0147 (2013.01); G02B 2027/0118 (2013.01); G02B 2027/014 (2013.01); G06T 17/20 (2013.01)

(57)**ABSTRACT**

Gaze tracking data representing a viewer's gaze with respect to one or more images presented to the viewer is used to generate foveated image data representing one or more foveated images characterized by a higher level of detail within one or more regions of interest and a lower level of detail outside the regions of interest. The image data for portions outside the one or more regions of interest is selectively filtered to reduce visual artifacts due to contrast resulting from the lower level of detail before compositing foveated images for presentation.

